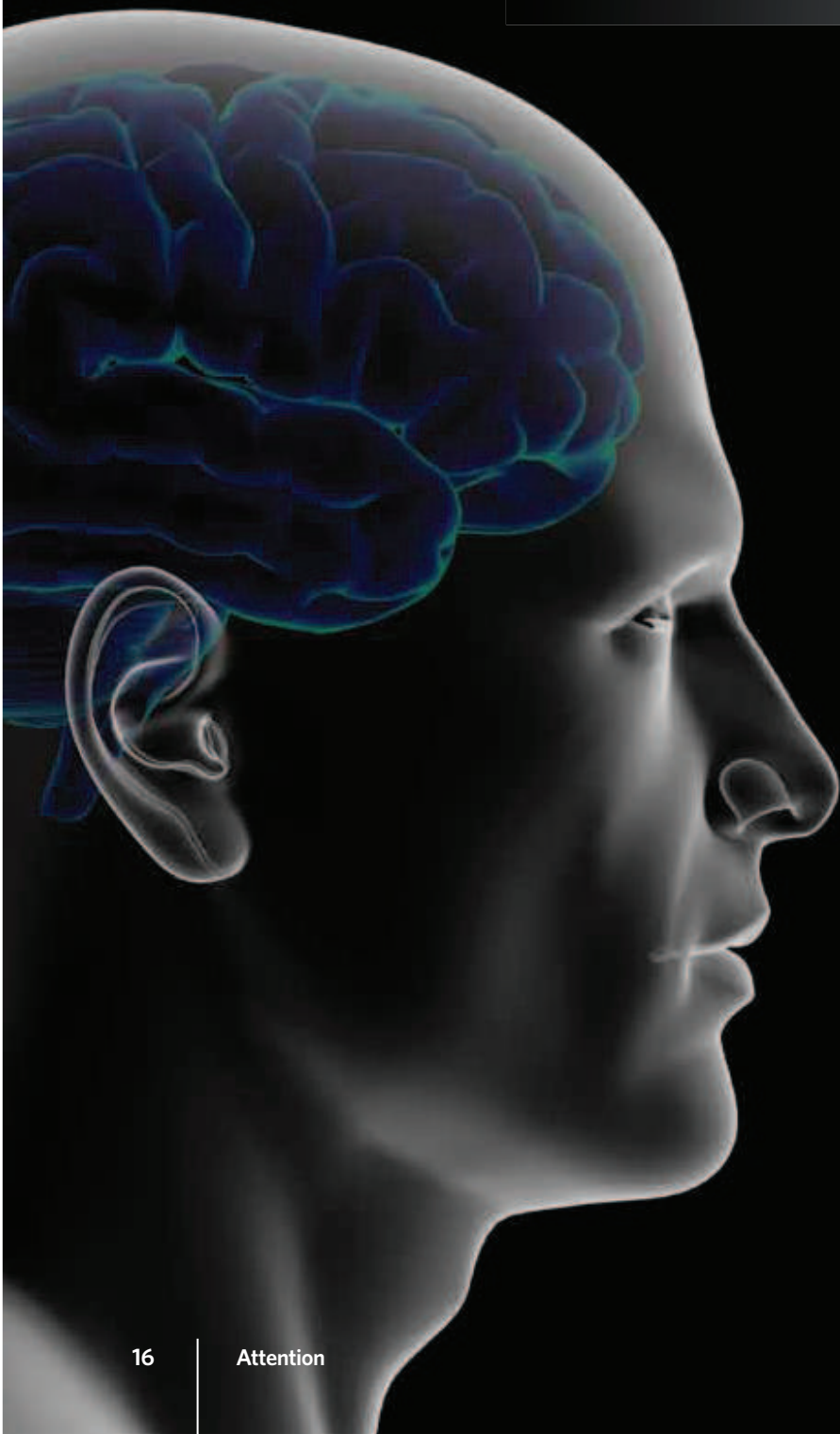


# ADHD Medication Essentials

by Charles Parker, DO



**ARE THE DETAILS OF ADHD MEDICATION MANAGEMENT** a challenge for you or your loved ones? Think back to when you or your child received the diagnosis of ADHD. Did your treating professional follow a “go slow and dose low” process? Make the effort to customize the dosage of ADHD medication? Ask about other factors such as sleep patterns? Did you even know these questions comprise an important part of the treatment process?

For many years, ADHD diagnosis and medical treatment appeared so completely simple—there’s your diagnosis, here’s your stimulant. At follow-up appointments, physicians frequently asked only that too-general question: “How is the patient doing?” Not knowing what more they could expect, parents and adults might say, “Better, I think.” Many others, however, silently voiced the internal response of “Not as well as I expected.”

The resulting disappointment and frustration too often caused people to abandon treatment, sometimes even condemning the ADHD caretaking system.

Today, we know much more about the brain as well as brain-body interactions. We know much more about cellular genetics, brain regions, dopamine transporters, the life cycles of neurotransmitters, and the multiple complex communication systems at play for anyone with ADHD, from child to aging adult. Today we also have world-class medication treatment tools to address the considerable ADHD problems that need attention.

Despite all that, the medication packages don’t come with full and necessary instructions and not all the physicians treating ADHD are well trained to do so. As a result, ADHD medication treatment still often starts as a bit of a gamble and too frequently ADHD medication management continues as a speculative process fraught with predictable problems. That is, *unless* you as the patient or parent prepare and plan for better odds. Sure, you can win sometimes with gambling, but more predictable results follow the science. Before they begin ADHD medication treatment, the entire treatment team—clinicians, patients and parents—need clear guidelines and a solid understanding of why those guidelines are necessary.

For example, learning more about the various medications used to treat ADHD can save you months or even years of misunderstandings and setbacks. Greater understanding will lead to a confidence that improves your communication with your medical team, thus optimizing your care and making the entire ADHD medication process far more predictable. The science is there—why not use it?



## Expected Duration of Effectiveness

Specific expected hours for the Duration of Effectiveness (DOE) associated with the most common stimulant medications (MPH: methylphenidate, AMP: amphetamine). Longer than these times the dose is often too much. Shorter than these times the dosage is often too little—consider the therapeutic window.

- **Ritalin Immediate Release Tab (IR)** - four hours/MPH
- **Ritalin Extended Release Cap (XR)** - eight hours/MPH
- **Concerta Cap (an XR)** - eight to nine hours/MPH
- **Adderall IR Tab** - five to six hours/AMP
- **Adderall XR Cap** - eight to ten hours/AMP
- **Dexedrine IR Tab** - five hours/AMP
- **Dexedrine XR Cap** - seven hours/AMP
- **Metadate CR Cap (XR)** - eight hours/MPH
- **Focalin IR Tab** - four hours/MPH
- **Focalin XR Cap** - eight to nine hours/MPH
- **Daytrana Patch** - ten to twelve hours/MPH
- **Vyvanse Cap (XR)** - adults twelve to fourteen hours - children ten - twelve hours - prodrug with a different delivery system /AMP
- **Intuniv Tab (Non-stimulant) 24 hr [Alpha 2 Agonist]**
- **Strattera Cap (Non-stimulant) 12 hr**

### Your medical team and your responsibility

Obviously, your best choice for treatment is a medical professional who

- is interested in treating ADHD
- specializes in the use of ADHD medications
- has experience adjusting medication dosages carefully and effectively over time.

Yet, many medical professionals don't recognize the importance of planning at the outset to customize your dosage, and they often don't follow the "go slow and dose low" method that works most predictably. Far too many suggest cookie-cutter ADHD medication dosages based upon age, weight, and other biased assumptions. Pharmaceutical interventions begun without thoughtful, customized dosage strategies based upon available science often end in disappointment.

Some pediatricians don't understand the psychiatric conditions that can accompany ADHD. Important disorders such as depression can be overlooked. Professionals who treat adults, even adult psychiatrists, often don't understand ADHD; their original training didn't include ADHD, and that frequently creates in them a bias against diagnosing and treating the disorder.

Whether the medical professional you work with is an expert or a novice, know that you must be an active, not a passive, team member. For example, if you don't know how to recognize ADHD symptoms (the targets for medication) and if you don't understand the importance of planning to treat the individual, you might not see the progress you hope to see. Bottom line: If you're informed and if you understand the logical methods behind successful treatment plans, you improve the odds of working successfully with any care provider.

The following guidelines provide a simple overview of the knowledge base needed for successful treatment outcomes.

### Medication specifics

**Drug details.** Every medication carries specific associated details regarding what it does. Knowing those details and the objective for using them is essential. Too many physicians prescribe medications that cause drug interactions without knowing those available interac-

tion details. For example, evidence suggests that Prozac and Paxil both significantly interfere with amphetamine metabolism causing dosage accumulation, and, too often, inappropriate irritated regressions.

**Size matters.** Adults or children with weight problems—too thin or overweight—often react quite poorly to stimulant medications. Be prepared for challenges until the underlying medical issues are resolved.

**Medication types.** Methylphenidate products (such as Ritalin, Focalin, and Concerta) are often seen as having fewer side effects, but some studies show amphetamines are generally more effective for some people. All immediate-release medications are more subject to abuse than the time-release versions. Amphetamines (such as Adderall, Dexedrine, Vyvanse) travel through a specific liver pathway that, depending on your genetics, causes amphetamines to metabolize at faster or slower rates of speed. Some can't take amphetamine products for this reason.

**Stimulant abuse.** Stimulant abuse is diminished with better supervision and fewer suggestions that stimulant meds "can be taken as needed." When stimulant medications serve as corrective lenses, are used responsibly at the determined intervals, and checked carefully, the abuse diminishes. Used whimsically and without an understanding of objectives often encourages irresponsibility. Most studies show that stimulants for ADHD discourage drug use, and that drug use is amplified by untreated ADHD.

**Stimulants and street drugs.** ADHD medications don't work when used regularly with marijuana, alcohol, cocaine, or opiates. They all compete for the same receptors and treatment with stimulant medications becomes quite ineffective. Use of alcohol with stimulants can be quite dangerous, as at first it seems that the alcohol is not creating a high. Then suddenly the combination of both acting together can create a marked regression with little awareness of dangerous consequences. How much alcohol can a person taking a stimulant medication safely consume? Some say none, others suggest no more than one shot or one beer.

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## Learning more about the various medications used to treat ADHD can save you months or even years of misunderstandings and setbacks. Greater understanding will lead to a confidence that improves your communication with your medical team.

### Key components of the treatment process

**Participate.** Every person, even children, must actively participate in the process of finding the right dosage for each medication tried. Both patients and professionals will do a better job if the patient with ADHD knows exactly what problems are targeted for resolution—the intention for the medications. Prepare to provide your doctor with informed feedback during every medication check. (If you're an adult and not quite clear about your challenges, recruit your spouse, family members, or close friends to round out the picture.)

**Dosage customization.** Every person with ADHD requires his or her own specific medication dosage based upon many variables. Genetics, immune system challenges, diet, and exercise all can modify dosage requirements. Dosage most often varies based upon each individual's metabolic patterns—the person's own personal “burn rate” for each medication. Body mechanisms do affect medication function. For example, if you're not eating a protein breakfast, ADHD meds will work far more unpredictably. Slow burn rates need less medication, fast burn rates more.

**Therapeutic window.** When you and your physician understand and use the concept of the “therapeutic window” for dosage

strategies, you will attain more predictable outcomes. The therapeutic window is the dosage point where the stimulant medication used for ADHD works at the best therapeutic level. If the medication dosage is outside the window, it simply is not working correctly, and you will become frustrated, disappointed, or angry. Shoot for that sweet spot inside the therapeutic window for best results. See the sidebar on this page for details.

**Identify key challenges.** Treat your brain function, not just vague superficial appearances. How you look on the outside does not describe who you are on the inside or the way you're thinking. The current diagnostic strategies often miss underlying impulsivity, ADHD “thinking anxiety,” and patterns around avoidance for all types of ADHD (hyperactive, inattentive, or combined).

### Conditions and contributing factors to watch

**Depression matters.** If depression is associated with your ADHD challenges, giving stimulant ADHD medications often aggravates the depression, leaving a big emotional drop in the afternoon and evening hours. On the other hand, if you're treated for depression and your ADHD is unrecognized, antidepressants can significantly increase ADHD symptoms, often looking like bipolar disorder. Stimulants with untreated depression can lead to moods and more depression. Antidepressants with untreated ADHD can lead to moods and more depression. Both need to be treated.

**Bipolar disorder, brain injury, autism spectrum, and substance abuse.** Associated brain and medical challenges often create more sensitivity to stimulant medications, not less. Brain neurotransmitters are already unbalanced, and adding a stimulant can create significant problems if these other conditions are not identified at the outset.

**Sleep.** The duration and quality of sleep always matter. Experts report that 8.25 hours is the optimal amount of sleep. If sleep is a problem, it must be addressed at the outset to ensure meds work effectively.

**Breakfast.** Studies show that a protein breakfast significantly improves focus and attention activities through the day into the afternoon. A good protein breakfast also markedly diminishes the gastric irritation and appetite suppression of stimulant meds. Individuals with eating disorders almost always react poorly to stimulant medications until that disorder is corrected. Always take stimulant medications *after* breakfast.

**Immunity challenges.** Gluten and casein (wheat and milk) sensitivities often significantly interfere with the effectiveness of stimulant medications. So do allergies to peanuts, soy, and other foods. The result is a therapeutic window that *at times* seems to work but then simply moves unpredictably even though stimulant dosage remains unchanged and the patient continues in compliance with meds. Changing medications remedies the problem for only days or months before more dosage changes are necessary to achieve an effective outcome. 🗣️



## The Therapeutic Window

**The Top:** If the dosage of stimulant meds is too high, the following symptoms may occur—more ADHD symptoms not less; anger, irritation, sleeplessness, appetite decrease, and impulsivity increases.

**The Sides:** Watch for the specific duration for that specific medication spelled out in this article. Duration of Effectiveness (DOE) is the key for every med check.

**The Bottom:** Medication is not effective at all, or insufficiently effective, based upon expected DOE. For example, a medication only works for five hours but should last for eight to ten hours. That inadequate dosage needs a slight increase.

**Record Keeping:** DOE should be an essential topic for review and record at every medication check.